## State of California AIR RESOURCES BOARD

## EXECUTIVE ORDER A-21-142

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

CUMMINS ENGINE COMPANY, INC.

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following Cummins Engine Company, Inc. 1996 model diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

| Engine Family          | Liters | (Cubic Inches) | Exhaust Emission Control Systems and Special Features              |
|------------------------|--------|----------------|--|
| TCE359D6DAAA<br>(403G) | 5.9    | (359)          | Oxidation Catalytic Converter<br>Turbocharger<br>Charge Air Cooler |

Engine models and codes are listed on attachments.

The certification exhaust emission standards for this engine family in grams per brake horsepower-hour are:

| Total               | Carbon          | Nitrogen      | <u>Particulates</u> |
|---------------------|-----------------|---------------|---------------------|
| <u>Hydrocarbons</u> | <u>Monoxide</u> | <u>Oxides</u> |                     |
| 1.3                 | 15.5            | 5.0           | 0.10                |

The certification exhaust emission values for this engine family in grams per brake horsepower-hour are:

| Engine                 | Total               | Carbon          | Nitrogen      | <u>Particulates</u> |
|------------------------|---------------------|-----------------|---------------|---------------------|
| <u>Family</u>          | <u>Hydrocarbons</u> | <u>Monoxide</u> | <u>Oxides</u> |                     |
| TCE359D6DAAA<br>(403G) | 0.3                 | 1.9             | 4.4           | 0.08                |

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this  $\angle$ 

\_day of November 1995.

R.\ B. Summerfield

Assistant Division Chief Mobile Source Division

| E.O.# | A-2 | ۱ - | 142 |  |
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## 199<u>6</u> AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL-STANDARD ENGINES

| Manufacturer <u>Cu</u>                                      | mmins Engine Co  | ompany, Inc. Er       | ngine Family             | (403 <b>G</b> ) | TCE359D6DA     | AA               |
|---|------------------|-----------------------|--------------------------|-----------------|----------------|------------------|
| Displace  | ment: / 5.9      | Liters                |                          |                 | /359           | _Cubic Inches    |
| Maximum Rated I   | Power: 160       | _HP @ <u>2600</u>     | _RPM                     | En              | gine Configura | tion: <u>I-6</u> |
| Ignition: Compre  | ssion <u>X</u>   | Comp                  | ression with Glow        | Plug_           |                | Spark_           |
| Fuel Type(s): Dedicated Flex-Fuel Dual-Fuel Diesel M100 M85 |                  |                       |                          | M85_            |                |                  |
|   |                  | CNG_ LN               | G_ LPG                   | Other (speci    | ify)           |                  |
| Diesel Cert Fuel:   | 13 CCR 2282      | <del></del>           | 40 CFR 86.1313-          | 90              | 40 CFR 86.1    | .313-94 <u>X</u> |
| Primary Intended  | Service Class: L | HD                    | MHD <u>X</u>             | HHD             | _ Urt          | oan Bus_         |
| Exhaust ECS (inc  | lude.MFI, TC, C  | AC):                  |                          |                 |                |                  |
|   |                  |                       | (use abbreviation        | ns per SAE J19: |                | I                |
| Engine Model  | Rated HP         | Fuel Rate  @ Rated HP | Fuel Pump<br>& Injector  | ECM/PCM         | EGR<br>Valve   | PTOX / Catalytic |
| (Eng Code)  | @ RPM            | mm3 / stroke          | Part No.                 | Part No.        | Part No.       | Converter        |
|   | ,                | (lbs/hr)              |                          |                 |                | Part No.         |
| B5.9-160  | 148 @ 2600       | 73 (64)               | FP:3921918<br>IN:3926817 | N/A             | N/A            | 3926233          |
| (1959)  |                  |                       | IN:3920817<br>IN:3922521 |                 |                | 3929433          |
|   |                  |                       |                          |                 |                |                  |
| B5.9-175  | 160@ 2600        | 76 (66)               | FP:3921920               | N/A             | N/A            | 3926233          |
| (1550)  |                  |                       | IN:3926818               |                 |                | 3929433          |
|   |                  |                       | IN:3922518               |                 | ·              |                  |
|   |                  |                       |                          |                 |                |                  |
|   |                  |                       |                          | _               |                |                  |
|   |                  |                       |                          |                 |                |                  |
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|   |                  |                       |                          |                 | :              |                  |
|   |                  |                       |                          |                 |                |                  |
|   |                  |                       |                          |                 |                |                  |
| Date Issued:  |                  |                       |                          |                 |                |                  |
| Revisions:  |                  |                       |                          |                 |                |                  |